

Module code: MOD006755	Version: 10 Date Amended: 18/Sep/2026
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1. Module Title
Research in Action: Statistical Thinking (Level 7)

2a. Module Leader
James Close

2b. School
School of Psychology, Sport and Sensory Sciences

2c. Faculty
Faculty of Science and Engineering

3a. Level
7

3b. Module Type
Standard (fine graded)

4a. Credits
15

4b. Study Hours
150

5. Restrictions			
Type	Module Code	Module Name	Condition
Pre-requisites:	None		
Co-requisites:	None		
Exclusions:	None		
Courses to which this module is restricted:			

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description

Psychology requires you to develop a critical understanding of the principles of quantitative data collection and analysis, whilst considering the theory behind various methods. You will cover theoretical, conceptual, and ethical issues during lectures, with emphasis on the logic behind the techniques you are learning, enabling you to see when it's appropriate to use a particular approach. The ideas covered in your lectures are brought to life by the use of associated practical and computer examples, helping you to understand how the research choices you make affect your data analysis options and the power of your statistical tests. You will get hands-on experience with data analysis, gaining skills in using and interpreting output from statistical software.

6b. Outline Content

- Principles of hypothesis testing: Distributions of data, parametric tests; - T-tests; related and unrelated. - Analysis of variance and the F-distribution: interactions - Statistical Power - Correlation: Pearson's r - Linear Regression - Use of statistical software to carry out statistical tests covered in the lectures. - Theories and approaches informing the principles of quantitative research methods, including experimental, observational, and correlational techniques. - Questionnaire design - Ethical issues in Psychology research - Collection of data, and its subsequent analysis and report.

6c. Key Texts/Literature

The reading list to support this module is available at: <https://readinglists.aru.ac.uk/>

6d. Specialist Learning Resources

It is essential that a dedicated computer laboratory is available for this module, with sufficient PCs to allow one student per PC in each seminar session. Each PC should be equipped with SPSS and the latest release of jamovi (<https://www.jamovi.org/>), N-Vivo, and an experiment generating programme (e.g. E-Prime), as well as standard software such as Microsoft Word and Excel. The PCs should also be connected to the internet. There should be space in the laboratory to allow students to work in groups or individually on statistics problems and experimental design. The course should be run within the context of a department with a good range and variety of research laboratories to support a range of group projects, with access to a range of equipment (such as video and tape recorders, psychophysiology equipment, transcribing machines, and appropriate psychological tests to be used under strict supervision). Software for writing experimental programmes (e.g. Gorilla) should also be available.

7. Learning Outcomes (threshold standards)		
No.	Type	On successful completion of this module the student will be expected to be able to:
1	Knowledge and Understanding	Discriminate correct use of a range of commonly used statistical tests
2	Knowledge and Understanding	Integrate data collection, interpretation and theory development
3	Intellectual, practical, affective and transferrable skills	Design and report empirical research, drawing appropriate conclusions
4	Intellectual, practical, affective and transferrable skills	Determine appropriate statistical tests and analyse data using statistical software.

8a. Module Occurrence to which this MDF Refers				
Year	Occurrence	Period	Location	Mode of Delivery
2026/7	ZZF	Template For Face To Face Learning Delivery		Face to Face

8b. Learning Activities for the above Module Occurrence			
Learning Activities	Hours	Learning Outcomes	Details of Duration, frequency and other comments
Lectures	22	1-4	Lecture 2 hrs x 10 weeks plus 1 hour lecture in TWs 1 and 12
Other teacher managed learning	22	1-4	Seminar 2 hr x 11 weeks
Student managed learning	106	1-4	62 hours coursework preparation; 44 hours exam preparation
TOTAL:	150		

9. Assessment for the above Module Occurrence

The assessment for some modules includes a presentation (see below for details on how this particular module is assessed). We recognise that presenting, especially to a large group, can cause significant anxiety or distress for some students. If this may affect you, please contact your Module Leader or the Disability and Neurodiversity Service as early as possible. We will work with you to consider appropriate reasonable adjustments. Depending on your individual needs, these might include, for example, presenting to a smaller group or presenting only to a member of academic staff.

Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
010	Practical	1-2	30 (%)	Fine Grade	40 (%)

In-Class MCQ Tests (1200 words equivalent)

Assessment components for Element 010

Component No.	Assessment Title	Submission Method	Weighting (%)	Components needed for Mark Calculation?
010/1	MCQ1		37 (%)	All
010/2	MCQ2		63 (%)	

Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
011	Coursework	2-4	70 (%)	Fine Grade	40 (%)

Project Report (1800 words)

Assessment components for Element 011

Component No.	Assessment Title	Submission Method	Weighting (%)	Components needed for Mark Calculation?
011/1	Project Report		98 (%)	All
011/2	SONA participation		2 (%)	

In order to pass this module, students are required to achieve an overall mark of 40% (for modules at levels 3, 4, 5 and 6) or 50% (for modules at level 7*).

In addition, students are required to:

(a) achieve the qualifying mark for each element of fine graded assessment as specified above

(b) pass any pass/fail elements

[* the pass mark of 50% applies for all module occurrences from the academic year 2024/25 – see Section 3a of this MDF to check the level of the module and Section 8a of this MDF to check the academic year]